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EXAMINER	
MILORD, MARCEAU	

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2618	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/698,550	Applicant(s) MOLOUDI ET AL.	
	Examiner Marceau Milord	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-93* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *33-38 and 70-75* is/are allowed.

6)☒ Claim(s) *1-15,23-32,39-62 and 76-93* is/are rejected.

7)☒ Claim(s) *16-22 and 63-69* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-15, 23-32, 39-62, 76-93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dacus et al (US Patent No 6223061 B1) and Parato (US Patent No 4149122).

Regarding claims 1- 5, 15, 23-24, Dacus et al discloses a mixer (figs. 2-3; figs. 9-10), comprising: a track and hold circuit (66 of fig. 2) to track and hold a first signal which is the first mixer (310 of fig. 9) which is also the first mixer in response to a second signal (col. 14, lines 19-51; col. 15, lines 17-26; col. 7, line 52- col. 8, line 32; col. 9, line 58- col. 10, line 16).

However, Dacus et al does not specifically disclose the feature of a bandpass circuit in cooperation with the track and hold circuit; wherein the track and hold circuit comprises first and second output signals, the mixer further comprising a buffer to combine the first and second output signals; wherein the bandpass circuit comprises an inductor and capacitor each being

coupled to the track and hold circuit, the inductor and capacitor cooperating to provide a time constant related to a frequency of the first signal.

On the other hand, Parato, from the same field of endeavor, discloses a tracking generator for a wideband super heterodyne receiver in which a fixed-frequency signal source supplies an IF signal to a mixer for conversion to an RF signal at the frequency to which the receiver is tuned. A second signal is supplied to the mixer from the local oscillator within the receiver. The fixed frequency IF signal may be converted to an RF signal at every frequency that the receiver can accommodate merely by sweeping the local oscillator throughout its frequency range (col. 2, lines 12-24). Furthermore, The receiver comprises an RF switch, a first RF attenuator, a preselector, a second RF attenuator, a mixer, an IF band-pass filter, an IF switch, an IF amplifier, an IF attenuator, an IF detector. In this mode, an RF signal is passed through the switch, the RF attenuator, the preselector, the attenuator to the mixer where it is converted to a signal at the IF frequency of the receiver. The IF signal is passed through the bandpass filter, the switch, the IF amplifier, the IF attenuator to the IF detector. In the calibration mode, the switches 202 and 208 are switched. The signal from the IF calibration source is fed through the switch 208, the band-pass filter to the mixer 206 where it is converted to a signal at the RF frequency to which the receiver is tuned (col. 3, lines 9-64; col. 4, lines 3-12; col. 4, lines 56-67; col. 6, lines 37-61; col. 7, lines 5-14). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Parato to the system of Dacus in order to provide a tracking oscillator capable of functioning with wideband receiving receivers using harmonic mixing.

Regarding claim 6, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the switch comprises a transistor having a gate coupled to the second signal (col. 11, lines 5-34).

Regarding claim 7, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) comprises a source coupled to the first signal (col. 14, lines 7-31).

Regarding claim 8, Dacus et al discloses a mixer (figs. 2-3; figs. 9-10) wherein the transistor further comprises a drain, and the bandpass circuit comprises a capacitor coupled to the drain (col. 9, lines 1-59)

Regarding claim 9, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the bandpass circuit comprises a capacitor coupled to the drain (col. 9, lines 1-59).

Regarding claim 10, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the bandpass circuit further comprises an inductor coupled to the source of the transistor (col. 9, lines 1-59).

Regarding claim 11, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the capacitor and inductor cooperate to provide a time constant related to a frequency of the first signal (col. 14, line 31- col. 15, line 15).

Regarding claim 12, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the bandpass circuit further comprises an inductor coupled to the source of the transistor (col. 9, lines 1-59).

Regarding claim 13, Dacus et al as modified discloses a mixer (figs. 3-4; figs. 9-10), wherein the transistor further comprises a drain, and the bandpass circuit comprises a capacitor coupled to the drain (col. 12, lines 5-col. 13, line 16).

Regarding claim 14, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10), wherein the capacitor and inductor cooperate to provide a time constant related to a frequency of the first signal (col. 11, lines 11-41).

Regarding claim 25, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the second transistor further comprises a drain coupled to the output of the transistor (col. 10, line 53- col. 11, line 38).

Regarding claim 26, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the bandpass circuit comprises a capacitor coupled to the output of the transistor (col. 9, lines 56-67; lines 3-23).

Regarding claim 27, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the second transistor further comprises a source, and the bandpass circuit further comprises an inductor coupled to the source of the second transistor (col. 10, lines 3-65).

Regarding claim 28, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the capacitor and inductor cooperate to provide a time constant related to a frequency of the first signal (col. 12, lines 12-53; col. 13,lines 1-26).

Regarding claim 29, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the second transistor further comprises a source, and the bandpass circuit further comprises an inductor coupled to the source of the second transistor (col. 10, lines 3-65).

Regarding claim 30, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the bandpass circuit comprises a capacitor coupled to the output of the transistor (col. 9, lines 1-59)

Regarding claim 31, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the capacitor and inductor cooperate to provide a time constant related to a frequency of the first signal (col. 12, lines 12-53; col. 13,lines 1-26).

Regarding claim 32, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the track and hold circuit and the bandpass circuit each comprises a differential circuit, the first and second signals each being differential signals (col. 7, line 12- col. 8, line 54)

Regarding claims 39 and 43, Dacus et al discloses a mixer (figs. 2-3; figs. 9-10) comprising: a track and hold circuit having a signal input, a control input, and a mixed signal output (col. 14, lines 19-51; col. 15, lines 17-26; col. 7, line 52- col. 8, line 32; col. 9, line 58- col. 10, line 16).

However, Dacus et al does not specifically disclose the feature of bandpass circuit coupled to the signal input and the mixed signal output.

On the other hand, Parato, from the same field of endeavor, discloses a tracking generator for a wideband super heterodyne receiver in which a fixed-frequency signal source supplies an IF signal to a mixer for conversion to an RF signal at the frequency to which the receiver is tuned. A second signal is supplied to the mixer from the local oscillator within the receiver. The fixed frequency IF signal may be converted to an RF signal at every frequency that the receiver can accommodate merely by sweeping the local oscillator throughout its frequency range (col. 2, lines 12-24). Furthermore, The receiver comprises an RF switch, a first RF attenuator, a preselector, a second RF attenuator, a mixer, an IF band-pass filter, an IF switch, an IF amplifier, an IF attenuator, an IF detector. In this mode, an RF signal is passed through the switch, the RF attenuator, the preselector, the attenuator to the mixer where it is converted to a signal at the IF

frequency of the receiver. The IF signal is passed through the bandpass filter, the switch, the IF amplifier, the IF attenuator to the IF detector. In the calibration mode, the switches 202 and 208 are switched. The signal from the IF calibration source is fed through the switch 208, the bandpass filter to the mixer 206 where it is converted to a signal at the RF frequency to which the receiver is tuned (col. 3, lines 9-64; col. 4, lines 3-12; col. 4, lines 56-67; col. 6, lines 37-61; col. 7, lines 5-14). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Parato to the system of Dacus in order to provide a tracking oscillator capable of functioning with wideband receiving receivers using harmonic mixing.

Regarding claim 40, Dacus et al discloses a mixer (figs. 2-3; figs. 9-10) further comprising an input circuit coupled to the signal input (col. 12, lines 5-57).

Regarding claim 41, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the mixed signal output comprises first and second output signals, the mixer further comprising a buffer to combine the first and second output signals (col. 7, lines 12-63).

Regarding claim 42, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the bandpass circuit comprises an inductor coupled to the signal input and a capacitor coupled to the mixed signal output (col. 9, lines 1-59)

Regarding claim 44, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the switch comprises a transistor having a gate coupled to the control input (col. 9, lines 12-59).

Regarding claim 45, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the transistor further comprises a source coupled to the signal input (col. 12, lines 1-49).

Regarding claim 46, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the transistor further comprises a drain, and the bandpass circuit comprises a capacitor coupled to the drain (col. 9, lines 1-59).

Regarding claim 47, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the bandpass circuit further comprises an inductor coupled to the signal input (col. 12, lines 1-49).

Regarding claim 48, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the capacitor and inductor cooperate to provide a time constant related to a signal frequency applied to the signal input (col. 12, lines 5-col. 13, line 16).

Regarding claim 49, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the bandpass circuit further comprises an inductor coupled to the signal input (col. 9, lines 1-59).

Regarding claim 50, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the transistor further comprises a drain, and the bandpass circuit comprises a capacitor coupled to the drain (col. 9, lines 1-59).

Regarding claim 51, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the capacitor and inductor cooperate to provide a time constant related to a signal frequency applied to the signal input (col. 12, lines 5-col. 13, line 16).

Regarding claim 52, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the track and hold circuit comprises a transistor having an input coupled to the signal input and an output coupled to the mixed signal output, and a current source coupled to the

mixed signal output, the current source being controlled by the control input (col. 11, lines 1-38;col. 12, lines 5-col. 13, line 16).

Regarding claim 53, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the current source comprises a second transistor having a gate coupled to the control input (col. 11, lines 1-38;col. 12, lines 5-col. 13, line 16).

Regarding claim 54, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the second transistor further comprises a drain coupled to the mixed signal output (col. 11, lines 1-38;col. 12, lines 5-col. 13, line 16).

Regarding claim 55, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the bandpass circuit comprises a capacitor coupled to the mixed signal output (col. 9, lines 1-59).

Regarding claim 56, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the second transistor further comprises a source, and the bandpass circuit further comprises an inductor coupled to the drain of the second transistor (col. 11, lines 1-38;col. 12, lines 5-col. 13, line 16).

Regarding claim 57, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the capacitor and inductor cooperate to provide a time constant related to a signal frequency applied to the signal input (col. 12, lines 12-53; col. 13,lines 1-26).

Regarding claim 58, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the second transistor further comprises a source, and the bandpass circuit further comprises an inductor coupled to the source of the second transistor (col. 11, lines 1-38;col. 12, lines 5-col. 13, line 16).

Regarding claim 59, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the bandpass circuit comprises a capacitor coupled to the mixed signal output (col. 10, lines 20-67; col. 9, lines 1-59).

Regarding claim 60, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the capacitor and inductor cooperate to provide a time constant related to a signal frequency applied to the signal input (col. 14, lines 7-34;col. 12, lines 12-53; col. 13,lines 1-26).

Regarding claims 61-62, Dacus et al discloses a differential mixer (figs. 2-3; figs. 9-10) comprising: a track and hold circuit having a differential signal input, a differential control input, and a differential mixed signal output (col. 14, lines 19-51; col. 15, lines 17-26; col. 7, line 52- col. 8, line 32; col. 9, line 58- col. 10, line 16).

However, Dacus et al does not specifically disclose the feature of a bandpass circuit coupled to the differential signal input and the differential mixed signal output.

On the other hand, Parato, from the same field of endeavor, discloses a tracking generator for a wideband super heterodyne receiver in which a fixed-frequency signal source supplies an IF signal to a mixer for conversion to an RF signal at the frequency to which the receiver is tuned. A second signal is supplied to the mixer from the local oscillator within the receiver. The fixed frequency IF signal may be converted to an RF signal at every frequency that the receiver can accommodate merely by sweeping the local oscillator throughout its frequency range (col. 2, lines 12-24). Furthermore, The receiver comprises an RF switch, a first RF attenuator, a preselector, a second RF attenuator, a mixer, an IF band-pass filter, an IF switch, an IF amplifier, an IF attenuator, an IF detector. In this mode, an RF signal is passed through the switch, the RF attenuator, the preselector, the attenuator to the mixer where it is converted to a signal at the IF

frequency of the receiver. The IF signal is passed through the bandpass filter, the switch, the IF amplifier, the IF attenuator to the IF detector. In the calibration mode, the switches 202 and 208 are switched. The signal from the IF calibration source is fed through the switch 208, the band-pass filter to the mixer 206 where it is converted to a signal at the RF frequency to which the receiver is tuned (col. 3, lines 9-64; col. 4, lines 3-12; col. 4, lines 56-67; col. 6, lines 37-61; col. 7, lines 5-14). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Parato to the system of Dacus in order to provide a tracking oscillator capable of functioning with wideband receiving receivers using harmonic mixing.

Regarding claims 76, 80, 87-88, Dacus et al discloses a mixer (figs. 2-3; figs. 9-10) comprising: track and hold means for tracking and holding a first signal in response to a second signal; the first signal being within the frequency band (col. 14, lines 19-51; col. 15, lines 17-26; col. 7, line 52- col. 8, line 32; col. 9, line 58- col. 10, line 16).

However, Dacus et al does not specifically disclose the feature of a limiting means for limiting the response of the track and hold means to a frequency band.

On the other hand, Parato, from the same field of endeavor, discloses a tracking generator for a wideband super heterodyne receiver in which a fixed-frequency signal source supplies an IF signal to a mixer for conversion to an RF signal at the frequency to which the receiver is tuned. A second signal is supplied to the mixer from the local oscillator within the receiver. The fixed frequency IF signal may be converted to an RF signal at every frequency that the receiver can accommodate merely by sweeping the local oscillator throughout its frequency range (col. 2, lines 12-24). Furthermore, The receiver comprises an RF switch, a first RF attenuator, a

preselector, a second RF attenuator, a mixer, an IF band-pass filter, an IF switch, an IF amplifier, an IF attenuator, an IF detector. In this mode, an RF signal is passed through the switch, the RF attenuator, the preselector, the attenuator to the mixer where it is converted to a signal at the IF frequency of the receiver. The IF signal is passed through the bandpass filter, the switch, the IF amplifier, the IF attenuator to the IF detector. In the calibration mode, the switches 202 and 208 are switched. The signal from the IF calibration source is fed through the switch 208, the band-pass filter to the mixer 206 where it is converted to a signal at the RF frequency to which the receiver is tuned (col. 3, lines 9-64; col. 4, lines 3-12; col. 4, lines 56-67; col. 6, lines 37-61; col. 7, lines 5-14). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the technique of Parato to the system of Dacus in order to provide a tracking oscillator capable of functioning with wideband receiving receivers using harmonic mixing.

Regarding claim 77, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) further comprising means for buffering first signal before being applied to the track and hold (col. 7, lines 12-63).

Regarding claim 78, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the track and hold means comprises first and second output signals, the mixer further comprising means for combining the first and second output signals (col. 7, lines 51- col. 8, line 10).

Regarding claim 79, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10), wherein the limiting means comprises an inductor and capacitor each being coupled to the track and hold means (col. 12, lines 5-col. 13, line 16).

Regarding claim 81, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10), wherein the switch comprises a transistor having a gate coupled to the second signal (col. 9, lines 12-59).

Regarding claim 82, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the transistor filter comprises a source coupled to the first signal (col. 9, lines 12-59).

Regarding claim 83, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the transistor further comprises a drain, and the limiting means comprises a capacitor coupled to the drain (col. 12, lines 5-col. 13, line 16).

Regarding claim 84, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the limiting means further comprises an inductor coupled to the source of the transistor (col. 12, lines 5-col. 13, line 16).

Regarding claim 85, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the bandpass circuit further comprises an inductor coupled to the source of the transistor (col. 12, lines 5-col. 13, line 16).

Regarding claim 86, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) (figs. 3-4), wherein the transistor further comprises a drain, and the bandpass circuit comprises a capacitor coupled to the drain (col. 12, lines 5-col. 13, line 16).

Regarding claim 89, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10), wherein the second transistor further comprises a drain coupled to the output of the transistor (col. 12, lines 5-col. 13, line 16).

Regarding claim 90, Dacus et al discloses a mixer (figs. 2-3; figs. 9-10) wherein the limiting means comprises a capacitor coupled to the output of the transistor (col. 12, lines 5-col. 13, line 16).

Regarding claim 91, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) wherein the second transistor further comprises a source, and the limiting means further comprises an inductor coupled to the source of the second transistor (col. 12, lines 5-col. 13, line 16).

Regarding claim 92, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10) (figs. 3-4), wherein the second transistor further comprises a source, and the limiting means further comprises an inductor coupled to the source of the second transistor (col. 12, lines 5-col. 13, line 16).

Regarding claim 93, Dacus et al as modified discloses a mixer (figs. 2-3; figs. 9-10), wherein the limiting means comprises a capacitor coupled to the output of the transistor (col. 9, lines 1-59).

Allowable Subject Matter

3. Claims 33-38, 70-75 are allowed.

Allowable Subject Matter

4. Claims 16-22, 63-69 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments with respect to claims 1-15, 23-32, 39-62, 76-93 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marceau Milord whose telephone number is 571-272-7853. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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